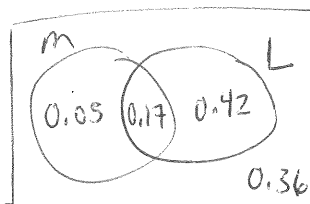


7.2 practice #1

NAME: _____



1. $P(M) = 0.22$; $P(L) = 0.59$; $P(M \text{ and } L) = 0.17$

a. Create the Venn Diagram and Table

b. $P(M \text{ and not } L) = 5\%$

c. $P(\text{not } M \text{ and not } L) = 36\%$

d. $P(M \text{ or not } L) = 58\%$

e. $P(\text{not } M \text{ or not } L) = 83\%$

	L	L ^c	total
M	17	5	22
M ^c	42	36	78
total	59	41	1

2. In a random sample of students it was found that 52% were female, 85% had a smart phone, and 39% were females with a smart phone.

a. Create the Venn diagram and Table

b. What is the probability that a randomly sampled student is:

i. Not a female $P(F^c) = 48\%$

ii. A female and doesn't own a smart phone 13%

iii. Not a female and owns a smart phone

iv. Not a female or doesn't own a smart phone

$P(F^c \text{ and } Sp) = 46\%$

$P(F^c \text{ or } Sp^c) = 61\%$

	Sp	Sp ^c	total
F	39	13	52
F ^c	46	2	48
total	85	15	100

3. A random sample of chat room users was taken in a study about negative criticisms about others. Out of the 193 people surveyed, 27 said they have criticized others (O), 42 said they have been personally criticized (P), and 19 said they have had both criticized and been personally criticized.

a. Create the Table for this situation.

b. What is the probability that a randomly sampled chat room person is:

i. Has not criticized others $P(O^c) = 166/193 = 86\%$

ii. Has criticized others and not been criticized personally $P(O \text{ and } P^c) = 8/193 = 4.15\%$

iii. Has not criticized others or not been criticized personally $P(O^c \text{ or } P^c) = 174/193 = 90.2\%$

iv. Has not criticized others or has been criticized personally

$P(O^c \text{ or } P) = 185/193 = 95.9\%$

	P	P ^c	total
O	19	8	27
O ^c	23	143	166
total	42	151	193

4. Given the following probability model, answer the questions below.

M&M Color	Brown	Blue	Red	Green	Yellow	Orange
Probability	35%	5%	20%	15%	15%	10%

What is the probability that and M&M is...

a. Green? $15\% = P(G)$

b. Not Brown? $65\% = P(B^c)$

c. Brown or Red? $55\% = P(B \text{ or } R)$

d. Not a primary color? (note: primary colors are red, blue, yellow) $P(R^c \text{ and } B^c \text{ and } Y^c) = 60\%$

e. Green or Orange? $P(G \text{ or } O) = 25\%$

f. Neither Red nor Yellow?

$P(R^c \text{ and } Y^c) = 65\%$